Department of Environmental Conservation (DEC)

Cruise Ship Waste Water Science Advisory Panel
Teleconference

July 26, 2012
8:00 AM – 10:00 AM (AK Time)

Panel members in Attendance

Mark Buggins*	Municipality of Sitka
Kenneth Fisher	EPA
Lamberto Sazon	United States Coast Guard
Lincoln Loehr**	Stoel Rives LLP
Thomas Weigend	Meyer Werft
Michelle Ridgway****	Oceanus Alaska Environmental Services
Dr. Silke Schiewer	University of Alaska Environmental Engineering
Dr. Simon Veronneau	Inter-University Research Centre on Enterprise Networks, Logistics and Transportation

* Mark Buggins fills the legislatively mandated coastal community Panel seat.
** Lincoln Loehr fills the legislatively mandated cruise ship industry Panel seat.
*** Steve Reifenstuhl fills the legislatively mandated commercial fishing industry Panel seat.
**** Michelle Ridgway fills the legislatively mandated NGO Panel seat.

Team Members and Guests

Andrew Sayers-Fay	ADEC
Rob Edwardson	ADEC
Ed White	ADEC
Albert Faure	ADEC
Dr. Mary Parke	ERM
Krista Webb	OASIS/ERM
Denise Koch	OASIS/ERM
Mike Tibbles	Alaska Cruise Association
Eric Zentner	Boreal Comm. Strategies (Subcontractor to OASIS)

Meeting Objectives

- The panel was briefed on how the responses to the Data Survey were incorporated into the draft version of the Data Survey Report.
- The panel reviewed the results of the survey.
- The panel was given the opportunity to make suggestions to be considered for incorporation into the the report.
- The panel outlined the schedule for the next Face to Face Meeting

Meeting Summary

OVERVIEW OF THE RESULTS OF THE DATA SURVEY

- Krista Webb gave a brief overview of how the responses to the data survey were tabulated in the report. She described how the report references the summary tables throughout its evaluation of existing technologies and practices. She described how the evaluation of these technologies was conducted within the panel's framework for the analysis of the Best Available Technology (BAT).
- Descriptions of the various sections in the data surveys and provided a matrix for reviewing them to the Panel.
    - Section A contains contract information such as the cruise schedules for Alaska waters and plans for modification or replacement of existing wastewater systems.
    - Section B contains information, mostly for the benefit of ADEC, on various aspects of waste management such as waste water holding times and the potential for on-shore wastewater transfer.
    - Section C contains technical information on the specifications for each of the ship's wastewater systems.
    - Section D contains information related to the costs associated with system upgrades as evaluated within the context of the BAT analysis.
    - Section E contains information on pollutants and water treatment processes. It includes extensive information from Princess Cruises and Holland America on their current and intended future treatment practices.
    - Section F contains information on discharge practices. It also contains responses to questions about the extent to which various restrictions related to discharge represent a burden to management and a limitation to the development of waste water management alternatives.
    - Section G contains the information collected specifically for the BAT analysis.

PRELIMINARY SUGGESTIONS FROM THE PANEL

- The panel discussed the overview of the data surveys and the Summary Tables presented. The team deliberated on various considerations associated with the information presented in Sections A through F and the Best Available Technology Worksheets.
- Several panel members suggested that available information regarding gray and black wastewater streams be added to the summary tables. For example, Princess does not mix galley water into their wastewater effluent, and Carnival treats and discharges gray water only.
- The team discussed how it would determine which of the available technologies is the most economically viable. Panel members were asked for suggestion on how to best establish a standardized method of calculating the actual treatment costs associated with a given technology. The team discussed various considerations pertinent to making such comparisons such as whether it should take into account the cost of water treatment relative to a ship's maximum passenger capacity, the actual number of passengers aboard the ship, or the number of passengers aboard the ship that provide revenue.

CONCLUSIONS FROM THE PRELIMINARY REPORT

- Panel members were reminded that the state mandated that the Panel identify economically feasible methods of treatment, prevention or control that will cause wastewater effluent to meet water quality standards at the point of discharge in Alaska waters. Preliminary application of the BAT framework shows that none of the currently used treatment systems meet these standards, and since none of the experimental technologies is available for maritime application, it follows that the panel will not be able to recommend a BAT for on-board treatment. It is still worthwhile to further investigate the practices for the ships outlined in the Best Available Technologies Worksheet since the data indicates that there are still ways to reduce pollution. The panel will continue to study the technical information associated with the promising technologies outlined in the report.
- The results of looking at the survey and other data within the BAT framework showed that there are no BATs for treatment or pollution prevention, but there may be for control options. The Panel should further evaluate the feasibility of the options outlined in the Control Method Table, namely treating partial waste water streams and holding for offshore discharge, on-shore discharge to POTW or on-shore discharge to polishing unit for treatment of metals and ammonia to WQS.
- Panelists will want to discuss and recommend options that were somewhat effective and recommend further development of treatment systems that could be effective in the future.
- The panel discussed monetizing AWTS capital costs in addition to the operational costs provided in the information surveys. The panel generally agreed that "per-person" costs would be most effective, and would include revenue passengers. More information will need to be compiled in order to accomplish this.

NEXT STEPS

- All of the suggested revisions from Panelists will be incorporated in the report. In order to get the last sections written, panel members will be asked to complete specific tasks in accordance with their areas of expertise. Panel members are encouraged to be responsive to each other's requests to discuss revisions and comments that have been made on the report.
- Contributions from Panelists will be recompiled to form a draft final version of the report to be submitted to Panel members by September 5th. The panel will then have an opportunity to further review and collaborate on the report during the September meeting.
- The team discussed the schedule for its upcoming meetings. The panel agreed to schedule its meeting at the Gold Belt for September 19th. They discussed the schedule for the events of the Technology Workshop on September 20 and the last Panel meeting day on September 21. The team tentatively agreed that the first meeting of the conference would begin later September 19th and end later that day to accommodate morning airline arrivals.

PUBLIC COMMENT

- No public comments were submitted.